UNITED STATES PATENT AND TRADEMARK OFFICE

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10/787,410	02/27/2004	Jong-jin Yi	Q78932	4531

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EXAMINER
ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _14 December 2007_.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-17 and 19-25_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) _6,7,16,17,19-21 and 23_ is/are allowed.
6)☒ Claim(s) _1,2,5,8-10,12-15,22,24 and 25_ is/are rejected.
7)☒ Claim(s) _3,4, and 11_ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All b)☐ Some * c)☐ None of:
        1.☒ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to a communication filed on 12/14/2007. Claims 10-17

and 19-25 are pending claim 18 is canceled.

Allowable Subject Matter

2.   The indicated allowability of claims is withdrawn in view of further examination to

Claims 1-2, 5, 8-10, 12-15, 22, 24-25. Rejections follow.

Response to Arguments

3   Applicant's arguments filed on 12/14/2007 have been fully considered but they are not

persuasive. Applicant argues that the cited references Kavanagh (USPN 6809726) and (USPN

7106307) do not teach the active regions comprises a region having coordinate values of four

edges of an active interface of the plurality of the interfaces, and a region having coordinate

values of four edges of a status bar.

Kavanagh on the other hand teaches valid operation is meant within an acceptable

boundary (18) (col. 4, lines 61-64), and discloses coordinate boundary 18 is shown as a radius

(circle), however, it is understood that boundary 18 may take other shapes such as a square,

rectangle, ellipse, etc. (col. 4, lines 12-14 and Fig. 3(18)).

Thus it would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize Kavanagh's boundary (18) which may take any shape (including

a square) for the purpose of determining whether the coordinates for each touch point (20)

are within an acceptable boundary or not as taught by Cavanaugh.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1-2, 5, 8-10, 12-15, 22, 24-25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kavanagh (USPN 6809726) in view of Cok (USPN 7106307).

Regarding claims 1, 5, 22, 24 and 25, Kavanagh teaches a touch screen system,

comprising, (touchscreen display, col. 3, lines 13-18 and Fig. 3 (10)) a display unit for displaying

at least one of a plurality of interfaces; (coordinate boundary (18) and Fig. 3(18)) a touch panel

for outputting a signal in correspondence with a touch input on the display unit; (display (10)

with a calibration point (24) col. 4, lines 20-24 and Fig. 3 (10, 24), displaying at least one

calibration target and sensing a calibration touch for at least one calibration target, col. 2, lines

49-50 and col. 2, line 52. Note the term "calibration" refers to mapping that provides correct

alignment of touch panel coordinates to display coordinates, col. 1, lines 51-52) a coordinate

value storage unit for storing coordinate value information indicating an active region of an

active interface of the plurality of the interfaces; (control logic processor (32) includes storage

device, memory (48) which functions as a data base in which coordinates entered for each valid

calibration operation are stored, col. 4, lines 39-43 and fig. 4 (32, 48); note that valid operation is

meant within an acceptable boundary (18), col. 4, lines 61-64) a decision unit for deciding

whether the first coordinate values exist in the active region indicated by the coordinate value

information stored in the coordinate value storage unit, in a decision; (a control logic processor (32) determines whether the coordinates for each touch point (20) are within an acceptable coordinate boundary (18), col. 4, lines 61-64. As discussed above, the control logic processor (32) also has a memory (48) in which coordinates entered for each valid calibration operation are stored) and a control unit for interrupting a response to the touch input if the first coordinate values exist outside the active region according to the decision of the decision unit (if the coordinates for an actual touch points (20) are not valid, control logic processor (32) executes recomputation step (42), or rejects compute coordinates (42) as indicated Fig. 5 (42), col. 5, lines 9-11).

Kavanagh does not specifically teach the active regions comprises a region having coordinate values of four edges of an active interface of the plurality of the interfaces and a region having coordinate values of four edges of a status bar.

Kavanagh on the other hand teaches valid operation is meant within an acceptable boundary (18) (col. 4, lines 61-64), and discloses coordinate boundary 18 is shown as a radius (circle), however, it is understood that boundary 18 may take other shapes such as a square, rectangle, ellipse, etc. (col. 4, lines 12-14 and Fig. 3(18)).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Kavanagh's boundary (18) which may take any shape (including a square) for the purpose of determining whether the coordinates for each touch point (20) are within an acceptable boundary or not as taught by kavanagh.

While kavanagh teaches a control logic processor (32) obtaining the coordinates of the actual touch point (20) for each calibration target displayed (col. 4, lines 56-58, Fig. 3 (20) and Fig. 4 (32)), kavanagh does not teach calculating first coordinate values of the touch input based on the signal outputted from the touch panel.

Cok on the other hand teaches an external controller 18 coordinating the application of various signals to the touch screen 10, and performing calculations based on responses of the touch sensitive elements to touches, in order to extract the (X, Y) coordinates of the touch (col. 1, lines 39-44 and Fig. 1 (18)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kavanagh's touch screen control system shown in Fig. 4 to adapt Cok's external controller 18 as configured in Fig. 1 because the use of an external controller (18) helps compute a location of the touch in a touch screen (10) as taught by Cok (col. 1, lines 35-37).

Regarding claim 2, Kavanagh teaches the coordinate value information stored in the coordinate value storage unit is updated according to a first interface to be activated (if the touch point 20 coordinates are verified to be within an acceptable coordinate boundary (18), control logic processor 32 stores the verified coordinates in a data base 48 (co. 5, lies 3-5); note there is only one acceptable coordinate boundary (18) as shown in Fig. 3).

Regarding claim 8, kavanagh teaches one interface of the plurality of interfaces is one of a box, a window, an icon, and a bar (coordinate boundary 18 shown as a circle in Fig. 3 may take shapes such as a square, rectangle ellipse etc., col. 4, lies 12-14).

Regarding claim 9, Kavanagh teaches the signal is a predetermined sensing signal (the calibration target corresponding to a previously determined calibration reference point; and sensing a calibration touch for at least one calibration target, col. 2, lines 50-52).

Regarding claim 10, kavanagh's teaches the first coordinate values indicate a position of the touch input (control logic processor 32 obtains the coordinates of the actual touch point 20 for each calibration target displayed, col. 4, lines 56-58).

Regarding claim 12, Kavanagh teaches the one interface of the plurality of interfaces is one of a box, a window, an icon, and a bar (coordinate boundary 18 shown as a circle in Fig. 3 may take shapes such as a square, rectangle ellipse etc., col. 4, lies 12-14).

Regarding claim 13, Kavanagh teaches the signal is a predetermined sensing signal (the calibration target corresponding to a previously determined calibration reference point; and sensing a calibration touch for at least one calibration target, col. 2, lines 50-52).

Regarding claim 14, Kavanagh teaches the first coordinate values indicate a position of

the touch input (control logic processor 32 obtains the coordinates of the actual touch point 20

for each calibration target displayed, col. 4, lines 56-58).

Regarding claim 15, Kavanagh teaches interrupting the response comprises ignoring the

touch input (Fig. 5 (42), rejecting compute coordinates, col. 5, lines 32-36).

Allowable Subject Matter

6.   Claims 3-4, 11 and 16 objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

7.   Claims 6-7, 16-17, 19-21 and 23 are allowed.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. The following art is cited for further reference.

U.S. Pat No. 7,057,607 to Mayoraz et al.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ABBAS I. ABDULSELAM whose telephone number is

(571)272-7685. The examiner can normally be reached on Monday through Friday from

9:00A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richard Hjerpe, can be reached on 571-272-7691. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/A. I. A./

Primary Examiner, Art Unit 2629

/A. I. A./

March 16, 2008